

REMARKS

Claims 1 – 26 have been examined and stand rejected under 35 U.S.C. §102(b) as anticipated by U.S. Pat. No. 6,278,949 (“Alam”). The rejections are respectfully traversed.

Independent Claim 1 requires “at each of a plurality of positions within the first N -dimensional volume, calculating a cross-correlation between the data distributed within the subvolume and corresponding data distributed in the first N -dimensional volume about the each of the plurality of positions.” Similar limitations are recited in independent Claims 17 and 21. This limitation is not taught or suggested by Alam.

As Applicants best understand, the Office Action is identifying the derivation of an “event dissimilarity” in Alam as corresponding to the calculation of a cross-correlation between data as recited in the claim (Office Action, p. 3). But the “event dissimilarity” described in Alam is clearly not a cross-correlation as that term is understood by those of skill in the art. The “event dissimilarity” of Alam is defined as:

$$\Delta_{EV}(x', y', \hat{i}, j') = \sum_k \delta_k(x', y', \hat{i}, j') / \mu_k : \mu_k \neq 0,$$

where δ_k is defined as the absolute difference between the k th attribute from a wave packet at (x', y', \hat{i}, j') and the relative origin, and μ_k is the median for the k th attribute (Alam, Col. 13, ll. 38 – 45; Col. 12, l. 63 – Col. 13, l. 8). As such, it is merely a difference measure and not a cross-correlation (*compare* Application, p. 9, ll. 10 – 13). Since the limitation is not disclosed, it is respectfully believed that Claim 1 is patentable.

While not directly relevant to a §102 analysis, it is further noted that the definition of the “event dissimilarity” in terms of derived attributes very much teaches away from the invention as claimed. The application explains that “[a] common feature of [the prior art] is that they attempt to identify some attribute that may be extracted from the data and to which ... pattern-recognition approaches may be applied” (Application, p. 1, ll. 27 – 28). Such approaches suffer from “a basic deficiency [in] their dependence on identifying an attribute that may be

extracted from the data that provides a parameter set having suitably predictive power” (*id.*, p. 1, ll. 30 – 33). The method taught by Alam is an example of just such an approach.

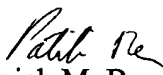
Such an approach is avoided by the claimed invention, which instead “calculat[es] a cross-correlation between the data distributed within [a] subvolume [that encloses a known feature of interest in a second volume] and corresponding data distributed in [a first volume].” Such an approach avoids “the difficulties that are necessarily associated with making [] identifications [of suitably predictive] attributes ... by relying on the underlying data itself” (*id.*, p. 3, ll. 28 – 30). One of the initial steps on which the entire approach of Alam is predicated is “associat[ing] with each event a number, N, of attributes” (Alam, Col. 8, ll. 22 – 23) on which its entire analysis then proceeds.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,


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